

XX.—*Description of a new Species of Reed-Rat (Aulacodus) from East Africa, with Remarks on the Milk-dentition of the Genus.* By OLDFIELD THOMAS.

AMONG the mammals obtained by Dr. J. W. Gregory on his recent expedition to East Africa are five specimens belonging to the genus *Aulacodus*. Of these, four—a skin with its skull, a separate skull, and two young specimens in spirit—all obtained at Ngatana, on the Tana River, belong evidently to *A. swinderenianus**, Temm., the common species, which is spread over the whole of the Ethiopian Region, from Senegal to the Cape. The fifth specimen, however—a skull alone—shows such differences from the others that I cannot but consider it to represent a distinct species. It belonged to a specimen obtained by Dr. Gregory in the Kikuyu Country, near Mount Kenia; but the skin was most unfortunately stolen, so that the only part which remains is the skull.

I propose to term the species

Aulacodus gregorianus, sp. n.

Size much smaller than in *A. swinderenianus*, the difference especially well-marked in the molar teeth; frontal region broad and flat, not convex or inflated, but, on the contrary, with distinct concavities just internal to the rudimentary postorbital processes. Opening between the olfactory and cerebral fossæ much broader above than below, the converse being the case in the other species; this difference appears to be due to the absence or reduction of the frontal sinuses. Anterior palatine foramina penetrating less than usual into the maxillæ, the most posterior point of the premaxillæ, on the palatal surface, being exactly level with their posterior margin.

Upper premolar (p.⁴) with a small third external root midway between the two main external roots, a character not present in any of the fourteen skulls of *A. swinderenianus* in the Museum. Upper incisors with the innermost of the four spaces between the grooves rather broader and the outer much narrower than in the ordinary species; in fact, in *A. swinderenianus* the part of the tooth outside the outermost groove is nearly equal to the whole remaining portion, while in *A. gregorianus* the same part is but little broader than the next section, between the outer and middle grooves.

* This name has generally been misspelt either as *swinderianus* (the original) or *swinderianus*; but as Temminck distinctly states that it is named in honour of Prof. van Swinderen, the proper form is clearly as above.

Dimensions of the typical skull (♂):—

Basal length * 72·7 millim.; basilar length * 65; greatest breadth 54·3; nasals, length 28, breadth 15·8; interorbital breadth 30; intertemporal breadth 29; height of skull from palate to middle of frontals 26·5, ditto from basion to top of occipital crest 26; palate, length from "henselion" 34·8; diastema 18·2; length of palatine foramina 9·4.

Teeth.—Diameter of $\frac{i.1}{i.1}$, longitudinal 4·3, transverse 5·5; length of upper molar series (crowns) 16; breadth of crown of $\frac{p.4}{p.4}$ 4·8, of $\frac{m.1}{m.1}$ 5·5; $\frac{i.1}{i.1}$, longitudinal diameter 4, transverse ditto 5·3; length of lower molar series 19; length of $\frac{p.4}{p.4}$ 5·4.

Hab. Luiji Reru River, Konu, Kikuyu Country, British East Africa. Alt. 5700 feet.

Coll. Dr. J. W. Gregory, June 10, 1893.

The above differential characters will no doubt be supplemented by others when, as I hope will soon be the case, perfect specimens of this interesting animal are obtained. It may be just noted that Heuglin's *A. semipalmatus*, of which I have seen the typical skull in Stuttgart, has a basal length of 85 millim. and an upper molar series of 18·2 millim., exactly as in average *A. swinderenianus*.

I am indebted to Dr. Gregory for the following note on the specimen of which the skull is here described:—

"While in a 'shauri' with the chiefs of the Konu district of Kikuyu, beside the Tana tributary Luiji Reru, which forms the northern boundary of the cultivated districts, a native came up with the *Aulacodus*, which he had just caught in the swamp in which the stream rose. I purchased it for two strings of beads, an empty meat-tin, and two used brass cartridges. The man declared that they were not common, and that the specimen was full-sized. I prepared the skin, but this was subsequently stolen and sold for food by my tent-boy.

"The following notes were made at the time:—It was a male; general appearance like that of the larger specimen caught at Ngatana. It appears to differ from that in the shortness and softness of the hair; the skin is lighter in colour on the lower part of the sides of the body; it is somewhat mottled, like that of a tabby cat. I also noted that the head appeared longer and the tail shorter than in the Ngatana

* By a convenient practice, now becoming general, the term *basal* length is restricted to that from the basion to the front of the premaxillæ (gnathion), while the *basilar* length is that introduced by Hensel, to the back of the alveoli of the incisors. For brevity's sake this latter point might be called the "henselion," as it is already so universally connected with the name of the great German craniologist.

specimen; but as I had skinned this latter more than six months before, the recollection is probably of little value. The measurements have unfortunately been lost with the skin, to which they were tied.

"I know nothing of its habits; but the natives say it occurs only in the reed- and sedge-covered swamps, which are here very numerous, owing to the windings of the stream."

The Milk-dentition of Aulacodus.

In connexion with the working out of the above, an examination of the teeth of *Aulacodus* at different ages has been made, and this has been rewarded by the discovery, in a fœtal specimen about 110 millim. in length, with a basal length of 34 millim., of minute and quite rudimentary milk-teeth fixed in the gum just above each of the premolars. This discovery confirms the usually accepted homology of the last-named teeth and also bears out the original suggestion of Schlosser* that the milk-teeth are shed in extreme youth, a suggestion which he afterwards unfortunately withdrew in favour of the theory that there is an ordinary tooth-change, the milk and permanent teeth being very like each other, except that the lower milk-teeth are more complicated than their successors. This error is evidently due to his having been deceived by the great difference between worn and unworn permanent teeth. This latter view is, of course, now finally disproved.

The contrast between *Hystrix*, with its long persistent mp.⁴, and *Aulacodus*, with its rudimentary and early shed one, is very striking.

Hensel † has recorded his failure to find any trace of rudimentary milk-teeth in *Phyllomys* and *Dactylomys*, and, to the best of my belief, they have not hitherto been observed in any members of the subfamily Echinomyiinae.

XXI.—*Note on Mus Burtoni, Thos.* By OLDFIELD THOMAS.

IN the 'Annals' for 1892 ‡ I described a West-African mouse under the above name; but Prof. T. Tullberg, of Upsala, who has himself given a most excellent account § of

* 'Palaeontographica,' xxxi. p. 131 (1885). See also Forsyth Major. Atti Soc. Ital. xv. p. 5 (1872).

† Abh. Ak. Berl. 1872. p. 53.

‡ (6) x. p. 182.

§ "Ueber einige Muriden aus Kamerun," Ges. Wiss. Upsala, 1893.